Louisiana Department of Environmental Quality (LDEQ)
Office of Environmental Services

STATEMENT OF BASIS

LOUISIANA REFINING DIVISION, COMBUSTION SOURCES
AGENCY INTEREST NO. 3165
MARATHON ASHLAND PETROLEUM LLC, LA REFINING DIVISION
GARYVILLE, ST. JOHN THE BAPTIST PARISH, LOUISIANA
Activity Number: PER19960001
Proposed Permit 2893-V0

I. APPLICANT:

Company:
Marathon Ashland Petroleum LLC
Airline Highway, Garyville, LA 70051

Facility:
Louisiana Refining Division
Approximate Coordinates: Latitude 30 deg., 3 min., 3 sec. and Longitude 90 deg., 35 min., 36 sec. Zone 15.

Permit Writer:
Syed Quadri
Office of Environmental Services, Permits Division

II. FACILITY AND CURRENT PERMIT STATUS AND PROPOSED PERMIT INFORMATION:

Marathon Ashland Petroleum LLC (MAP) is a fully integrated petroleum refinery. The refinery processes both foreign and domestic crude oil into a variety of products including, but not limited to, liquefied petroleum gas, motor and heating fuels, asphalt, elemental sulfur, petroleum coke, etc. The crude refining capacity of the refinery is approximately 268,000 barrels per stream day. The Standard Classification (SIC) Code is 2911.

The refinery is located on the Mississippi River in St. John the Baptist Parish. The property is originally known as San Francisco plantation and is 34 miles from New Orleans and 46 miles from Baton Rouge.

This is the renewal Part 70 permit for a portion of the facility (Coker, Gasoline Desulfurization and New Distillate Hydrotreater Units) that will be issued to MAP which mainly addresses and updates and modifies the existing permit, Part 70 Permit No. 2640-V3 dated August 12, 2005 based on the capital projects and the removal of thermal oxidizers, reboilers and heaters which are now permitted under Part 70 Permit No. 2893 dated December 16, 2005.

Refining operations typically involve the following four categories: storage, separation, conversion, and blending.

Storage: Petroleum and its products are most commonly stored in steel tanks, either under atmospheric conditions or under pressure, depending upon the boiling point of the material stored.

Separation: Separation operations include distillation (separation by boiling), gravity separation (separation of two immiscible materials of different densities by effects of gravity, either natural or mechanically produced), extraction (removal of a compound from a mixture by contacting the mixture with an immiscible solvent in which the compound is more soluble than it is in the mixture), absorption/adsorption (removal of a compound from a mixture reaction with another compound which is bound in another material).

Conversion: Conversion operations include: dissociation (breaking of large chemical compounds into smaller chemical compounds), rearrangement (rearranging the order and pattern in which carbon and hydrogen atoms are connected in a chemical compound), and chemical combination (the addition of two or more smaller chemical compounds to from a larger compound).

Blending: Blending is the final step in the production of finished petroleum products to meet quality specifications and market demands. A large volume operation may include the blending of various gasoline stocks, including alkylates and additives. The blending operation can be accomplished by blending individual components in single tank or by mixing the components in a piping system.

MAP currently processes crude oil into unleaded, mid-grade, super unleaded, and reformulated gasoline; jet fuel/kerosene; low and high sulfur diesel and No. 6 fuel oil; isobutene; propane; propylene; asphalt; coke and sulfur. Processes used in the refining of these products are atmospheric distillation, vacuum distillation, desalting, fluid catalytic cracking, hydrotreating, asphalt production, hydrogen fluoride (HF) alkylation, reforming, isomerizing and coking. Daily average production includes approximately six million gallons of gasoline and two million gallons of diesel fuel depending on crude types and seasonal demands. The combustion sources at the refinery are fueled by either natural gas, refinery gas or a combination of natural gas and refinery fuel. Other fuels used are purge gas, synthetic gas, diesel, and gasoline but are not used in heaters and boilers.

The facility has several emission sources, which are considered insignificant based on size, emission or production rates, type of activities, type of pollutants,

and emission limits as per the requirements of LAC 33:III.501.B.5. These sources have been quantified where required and are addressed in the permit application and will also be listed in the permit. MAP is authorized typical emissions, which are associated with routine operations that are under control upon release and are predictable in nature (sampling, startups, shutdowns, cleaning of and/or taking tanks out of service, purging vessels to flare, instrument maintenance, recharging a catalyst, catalyst loading/unloading, platformer catalyst dust removal system, changing filters, changing carbon canisters, MDEA reclaiming, maintenance activities (associated with valves, pumps, knock-out drums, compressors, pipes, flanges, monitors, and exchangers)) and are governed by the Louisiana General Condition No. XVII. These emissions are generally short term and/or intermittent in nature and have no significant impact on air quality. These emissions are quantified and included in the permit.

Early Reduction Program: Title III provides for a voluntary early program. MAP is a participant of this program and is operating under a Permit No. 2209500013 effective date July 25, 1997, to reduce HAP emissions from Platformer Regenerator Vent (Emission Point 62-74) and Fluid Catalytic Cracking Unit Vent (Emission Point 86-94) for non-particulate HAP and particulate HAP, respectively. For these emissions a MACT has been promulgated (40 CFR 63 Subpart UUU) and the facility will be in compliance for non organic HAPs by April 11, 2011. Cooling Towers (Emission Point 61A-74 thru 61D-74) and Marine Loading Operations (Emission Point 107-90) were also part of the above referenced permit for early reduction program. These emissions are already in compliance with the MACT (40 CFR 63 Subpart Q and Subpart CC) since March 8, 1995 and August 18, 1998, respectively.

This permit was reviewed for compliance with Louisiana Air Quality Regulations and New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAP). Prevention of Significant Deterioration (PSD) does not apply.

This facility is part of a major source of toxic air pollutants. The Air Toxic Compliance Plan No. 92050 was approved April 13, 1995.

The sources included in this permit are subject to the requirements of National Emission Standards for Hazardous Air Pollutants for Source Categories, 40 CFR 63, Subpart CC - National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries; 40 CFR 63 Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants from Industrial, Commercial, and Institutional Boilers and Process Heaters; 40 CFR 63, Subpart EEEE - National Emission Standards for Hazardous Air Pollutants: Organic Liquid Distribution (Non-Gasoline); and Subpart ZZZZ - National Emission Standards for Hazardous

Air Pollutants for Stationary Reciprocating Internal Combustion Engines; NESHAP, 40 CFR 61, Subpart FF - National Emissions Standard for Benzene Waste Operations; New Source Performance Standards, 40 CFR 60, Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984; New Source Performance Standards, 40 CFR 60, Subpart QQQ – Standards of Performance for VOC Emissions From Petroleum Refinery Wastewater Systems; New Source Performance Standards, 40 CFR 60, Subpart GGG - Standards of Performance for Equipment Leaks of VOC in Petroleum Refinery; LAC 33:III.Chapter 51 - Comprehensive Toxic Air Pollutant Emission Control Program; and LAC 33:III.2121 – Fugitive Emission Control.

MAP proposes to incorporate the capital project which will be undertaken before and during the 2006 turnaround. The facility will also move emissions from the existing thermal oxidizers, reboilers and heaters to another permit.

Many projects in the past were considered for New Source Review (major modifications) and Prevention of Significant Deterioration (PSD) review and the permits were issue. No PSD permit included VOC best available control technology (BACT) analysis or requirements.

Several permits addressing portions of the facility were issued in the past including Prevention of Significant Deterioration (PSD) permits. All state permits were consolidated into Part 70 permits. The Part 70 and PSD permits are as follows:

Permit #	Units or Sources	Date Issued
PSD-LA-548		3/16/1989
PSD-LA568		10/25/1991
PSD-LA-640	Coker Project	10/21/1999
2640-V4	Gasoline Desulfurization Unit Project	On Public Notice
2887-V2	Fugitive and Miscellaneous Emissions	12/16/2005
2891-V2	Storage Tanks	12/20/2005
2893-V1	Combustion Sources	12/16/2005

Permitted Air Emissions

Permitted emissions from the Coker, Gasoline Desulfurization and New Distillate Hydrotreater Units in tons per year are as follows:

Pollutant	Before	After	Change*
PM_{10}	27.57	4.28	- 23.29
SO_2	481.24	0.58	- 480.66
NO_X	172.92	1.50	- 171.42
CO	99.86	0.32	- 99.54
VOC	100.26	87.59	- 12.67

* Thermal oxidizers, heaters and reboilers were moved to Part 70 Permit No. 2893-V0

Prevention of Significant Deterioration Applicability

Prevention of Significant Deterioration (PSD) review is not required as the total estimated emissions increase of criteria pollutants for both the project is less than the PSD significance level.

This application was reviewed for compliance with the Louisiana Part 70 operating permit program, Louisiana Air Quality Regulations, Louisiana Comprehensive TAP Emission Control Program, NSPS, and NESHAP. PSD regulations do not apply.

This facility is part of a major source of toxic air pollutants. The Air Toxic Compliance Plan No. 92050 was approved April 13, 1995.

General Condition XVII Activities

The facility will comply with the applicable General Condition XVII Activities emissions as required by the operating permit rule. However, General Condition XVII Activities are not subject to testing, monitoring, reporting or recordkeeping requirements. For a list of approved General Condition XVII Activities, refer to Section VIII of the proposed Part 70 permit.

Insignificant Activities

All Insignificant Activities are authorized under LAC 33:III.501.B.5. For a list of approved Insignificant Activities, refer to Section IX of the proposed Part 70 permit.

III. Permit Shields

No permit shields are being granted at this time.

IV. Periodic Monitoring

The facility's fugitive emissions monitoring program consolidation approved by LDEQ on April 13, 1995 is being incorporated into the Part 70 permit for the fugitive components and the WWTP. Through the fugitive emission monitoring program consolidation, the facility will comply with the monitoring requirements of LA Refinery MACT and other relevant requirements as stated in the permit application. A specific condition will be incorporated in the permit to reflect this consolidation.

V. Applicability and Exemptions of Selected Subject Items[1]
See "Early Reduction Plan" for details

VI. Streamlined Requirements			
Unit or Plant Site	**Programs Being Streamlined**	**Stream Applicability**	**Overall Most Stringent Program**
See Part 70 Specific Condition No. 1 for details			

VII. Glossary

Best Available Control Technologies (BACT) - An emissions limitation (including a visible emission standard) based on the maximum degree of reduction for each pollutant subject to regulation under this part which would be emitted from any proposed major stationary source or major modification which the administrative authority, on a case-by-

case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source or modification through application of production processes or available methods, systems, and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for control of such pollutant.

Carbon Monoxide (CO) – A colorless, odorless gas which is an oxide of carbon.

Grandfathered Status- Those facilities that were under actual construction or operation as of June 19, 1969, the signature date of the original Clean Air Act. These facilities are not required to obtain a permit. Facilities that are subject to Part 70 (Title V) requirements lose grandfathered status and must apply for a permit.

Hydrogen Disulfide (H_2S) - A colorless inflammable gas having the characteristic odor of rotten eggs, and found in many mineral springs. It is produced by the action of acids on metallic sulfides, and is an important chemical reagent.

Maximum Achievable Control Technology (MACT) - The maximum degree of reduction in emissions of each air pollutant subject to LAC 33:III.Chapter 51 (including a prohibition on such emissions, where achievable) that the administrative authority, upon review of submitted MACT compliance plans and other relevant information and taking into consideration the cost of achieving such emission reduction, as well as any non-air-quality health and environmental impacts and energy requirements, determines is achievable through application of measures, processes, methods, systems, or techniques.

New Source Review (NSR) - A preconstruction review and permitting program applicable to new or modified major stationary sources of air pollutants regulated under the Clean Air Act (CAA). NSR is required by Parts C ("Prevention of Significant Deterioration of Air Quality") and D ("Nonattainment New Source Review").

Nitrogen Oxides (NO_x) - Compounds whose molecules consists of nitrogen and oxygen.

Nonattainment New Source Review (NNSR) - A New Source Review permitting program for major sources in geographic areas that do not meet the National Ambient Air Quality Standards (NAAQS) at 40 CFR Part 50. Nonattainment NSR is designed to ensure that emissions associated with new or modified sources will be regulated with the goal of improving ambient air quality.

Organic Compound - Any compound of carbon and another element. Examples: Methane (CH_4), Ethane (C_2H_6), Carbon Disulfide (CS_2)

Part 70 Operating Permit- Also referred to as a Title V permit, required for major sources as defined in 40 CFR 70 and LAC 33:III.507. Major sources include, but are not limited

to, sources which have the potential to emit: ≥ 10 tons per year of any toxic air pollutant; ≥ 25 tons of total toxic air pollutants; and ≥ 100 tons per year of regulated pollutants (unless regulated solely under 112(r) of the Clean Air Act) (25 tons per year for sources in non-attainment parishes).

PM_{10}- Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers as measured by the method in Title 40, Code of Federal Regulations, Part 50, Appendix J.

Potential to Emit (PTE) - The maximum capacity of a stationary source to emit any air pollutant under its physical and operational design.

Prevention of Significant Deterioration (PSD) – A New Source Review permitting program for major sources in geographic areas that meet the National Ambient Air Quality Standards (NAAQS) at 40 CFR Part 50. PSD requirements are designed to ensure that the air quality in attainment areas will not degrade.

Sulfur Dioxide (SO_2) – An oxide of sulphur.

Title V permit – See Part 70 Operating Permit.

Volatile Organic Compound (VOC) - Any organic compound which participates in atmospheric photochemical reactions; that is, any organic compound other than those which the administrator of the U.S. Environmental Protection Agency designates as having negligible photochemical reactivity.